

3 vols  
Midwifery

No 1

No 56.



Essay on  
Menstruation.

By Richard C. Mason

of Virginia

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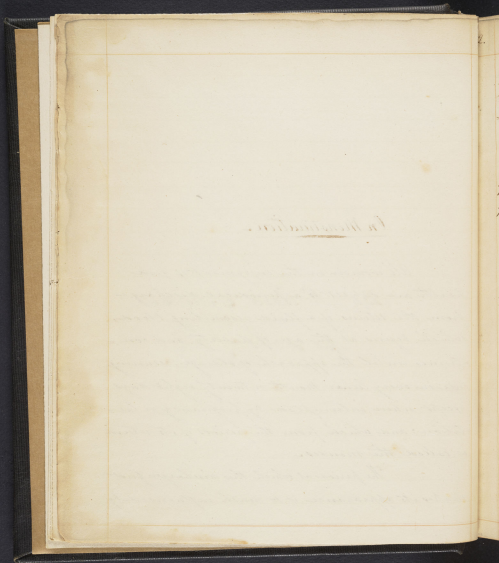
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By Richard Collins  
of Providence  
Sept. 2nd 1816

### On Menstruation.

All women in the enjoyment of good health are subject to a periodical discharge from the uterus, of a fluid resembling blood, which begins at the age of puberty and continues until the approach of old age, recurring once in every lunar month or twenty eight days except when interrupted by pregnancy or lactation; and which from the period of its return is called the menses.

The period at which this discharge first makes its appearance, is so much influenced by



by climate and constitution, as well as by the  
mode of life and other adventitious circum-  
stances, that there is almost an endless variety in  
the time of its first accession in different climates  
and different individuals. The early appearance  
of the menses is always in proportion to the warmth  
of the climate; and hence in Greece and other hot  
countries women are said to menstruate so early  
as the age of eight or nine years, while in the  
colder and more northern climates menstruation  
does not take place sooner than the eighteenth  
or twentieth year. And in Lapland it is even  
said only to occur in the summer season.

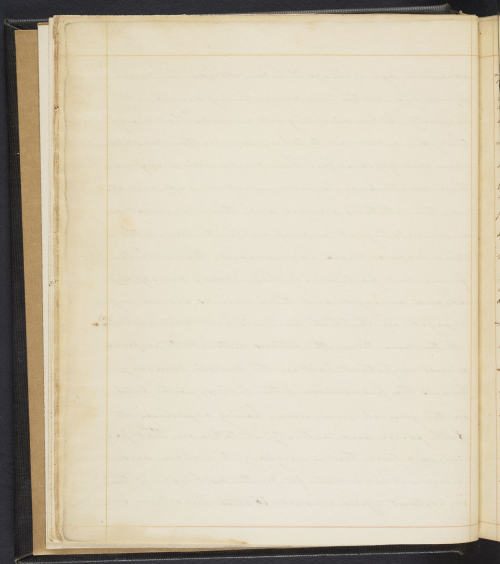
In the United States however and other climates  
of a moderate temperature, the menses begin to flow  
about the twelfth or fourteenth year, sooner or later  
according to the individual constitution, the habits  
mode of life &c.

The time however at which they do  
appear, whether it be at an earlier or a more

\* See Gamman's Introduction to the practices of mid-  
wifery - page 78 -

advanced age is always to be considered the period of puberty - At this time, women having arrived at maturity, Dr. Denman very well remarks "that many changes are observed to take place in their constitution and appearance;" Their complexion is improved, their countenance is more expressive and animated, their attitudes graceful and their conversation more intelligent and agreeable; the tone of their voice becomes more harmonious, their whole frame but particularly their breasts are expanded and enlarged, and their minds are no longer engaged in childish pursuits and amusements.

At the same time, the Uterus destined to perform a most important part in the female economy towards the procreation of the species, participates in the general revolution; having acquired its full form and activity it takes on that peculiar action that is necessary to prepare and preserve it in a state fit for the discharge of the important office assigned to it - This action im-



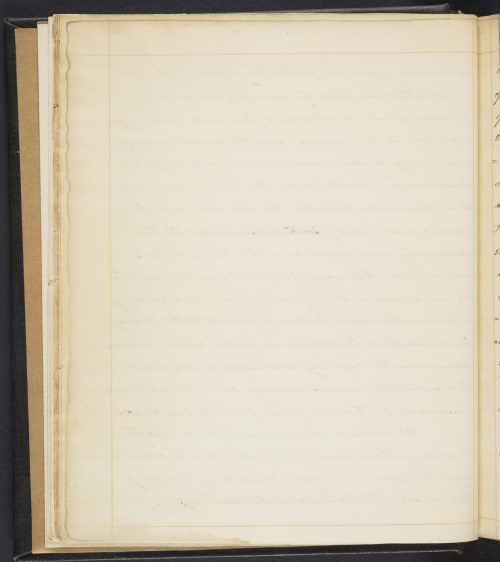
perfectly performed at first, is generally attended  
by a train of symptoms denoting general feeble  
action, with pain in the back, loins & head, togeth-  
er with flatulency and other hysterical affections of  
the stomach and bowels; which are relieved  
by the Catamenial discharge that now takes place  
for the first time; which flows in small quantity  
and is but imperfectly formed, appearing for the  
most part colourless, resembling mucus, or but slight-  
ly tinged with red. Nor does its appearance denote  
a perfect action in the Uterus, until several peri-  
ods; when the discharge assumes a dark brown  
colour; and the act of Menstruation is hence-  
forth unattended by any indisposition, generally  
except a slight pain in the back with some  
degree of languor.

The same general causes which have  
been said to operate in influencing the first  
appearance of the menses, operate so powerfully  
in regulating the quantity discharged, as well

the Providence introduction to the functions of the  
- 179 - page 79 -

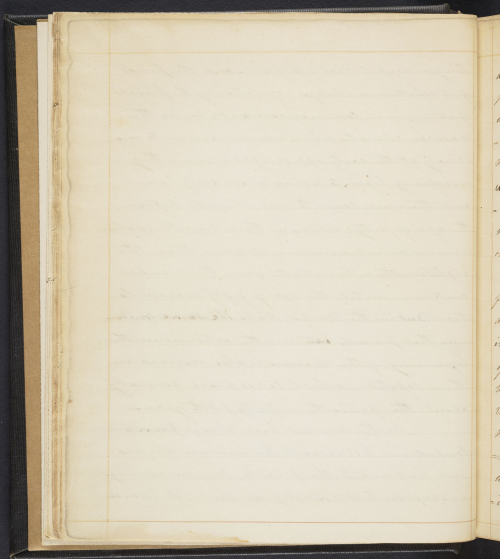
as the time required for the completion of each period; that we find the quantity varying in climates of extreme degrees of heat and cold, from eighteen to two ounces; and the periods lasting from only a few hours to ten days or longer; And in our <sup>own</sup> climate where the temperature is at a medium between the two extremes, there exists a great variety ~~both in the~~ respect to the quantity discharged and the time it lasts, not only in different constitutions but in the same woman at different periods, according to circumstances - But as a general rule it may be remarked that women under equal circumstances in this country discharge from four to six or eight ounces during each period which commonly continues from four to six days -

As women advance in years, and the vigour of their constitutions begin to decline, and they are no longer capable of bearing children, the catamenial discharge, no



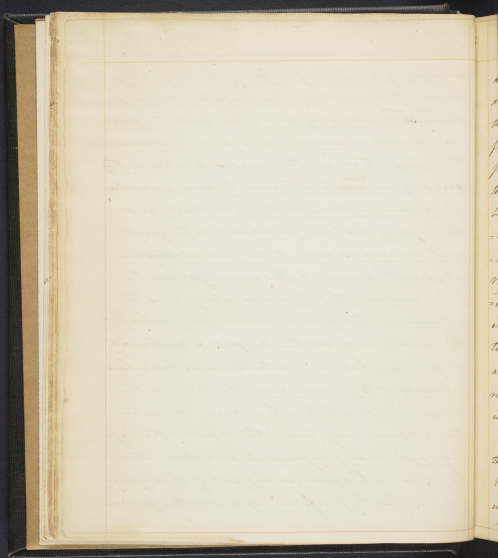
longer useful, ceases to flow - and the period of its cessation is always regulated by the period of its original commencement. for in the warmer climates where women arrive to maturity at the early age of eight or nine, they necessarily begin to decline at an early period and therefore cease to menstruate before the age of forty; while in those countries where women do not menstruate sooner than the eighteenth or twentieth year, the menses continue until the age of fifty or even later. But in the United States, ~~the same~~ ~~medium~~ ~~that~~ prevails between the extremes in the beginning of the menses, is also observed in their cessation, which takes place generally about the fortieth or forty fifth year -

As the Menses have always been considered peculiar to the human species - and confined to the female sex, no discharge analogous to it existing in men, it became



a subject of interesting enquiry at a very early  
period, to account for this singular discharge,  
which <sup>was observed to</sup> be so intimately connected with the gene-  
-ral health of women, as to have induced  
the belief that all the diseases to which they  
were subject <sup>were</sup> ~~to~~ to be traced to some irregular-  
-ity or interruption in its evacuation; and  
this enquiry has been prosecuted with great  
zeal, in all ages down to the present time.

And with a view to this investigation the  
first question that presented itself was to  
determine the precise source from which  
it flowed; and on this subject a contrariety  
of opinion has been entertained: Some have  
believed it to proceed from the cavity of the  
uterus itself; while others have maintained  
that it came only from the vessels of the Vagi-  
-na; and many arguments and observations  
have been alleged in support of each opi-  
-ion; but as the proofs in support of the former



are so evident as to ~~put~~ the question beyond doubt at this day, it would seem unnecessary to say any thing on the subject here, as the very fact itself of the suppression of the menses during pregnancy is all sufficient to prove the Uterus to be the true source. To this however it may be objected, that the menses do sometimes continue to flow even during the state of pregnancy, and therefore must proceed from the Vagina; but this objection does not at all invalidate the general position, for in the very few instances in which such an evacuation does take place, it is to be considered entirely accidental; and by no means of the same nature as the menstrual discharge, which is now clearly ascertained to be the fact.

If however additional proof were necessary to establish the fact, the observations of Vesalius, Peyer, Mauriceau, Littre and Schurig, afford us ample testimony; for they all, according

\* See treatise by Dr. Astuc on the diseases of women  
Lond. Edit. 1<sup>st</sup> Vol. page 14<sup>th</sup>

to Dr Astruc,\* declare they "have seen the menses flow from the orifice of the Uterus in women, who afforded an opportunity of ascertaining the fact, because they had a descensus of the whole body of the Uterus, even to the extremity of the Vulva"; to which the two last add, that not a drop of blood flowed from the vagina, of which they could see the whole circumference." In addition to which, as we are informed by the same author,

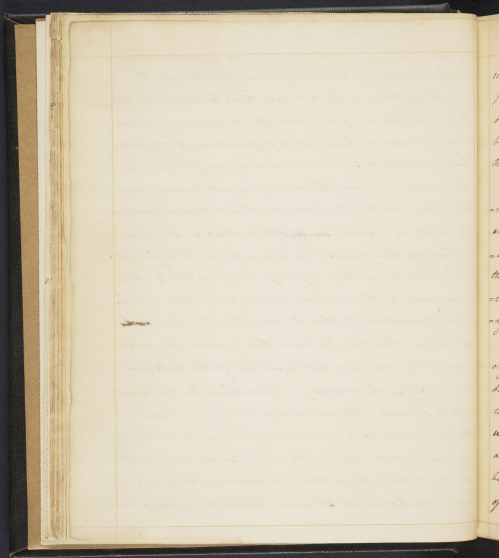
Morgagni has found "in all the observations he has made on women, who died during the time of their menses, or a few days after having had them, that the fundus of the Uterus was marked with a great number of bloody spots, but that there appeared nothing like it in the vagina."

Since then, the fact has been proven to demonstration, that the menses do proceed from the cavity of the Uterus; it has been deemed of

\* To James' Lectures -

sufficient importance by some, to extend the investigation with a view to determine whether they were discharged from the orifices of veins or arteries; and here too a difference of opinion has prevailed; Dr Astruc is among the number who believed them discharged from veins and founds his opinion on their colour; which he says "is brown ~~and~~ often black, such as is that of the veins"; the Downes too, "he says, with which it flows drop by drop, is agreeable to the manner of that which comes from the veins".

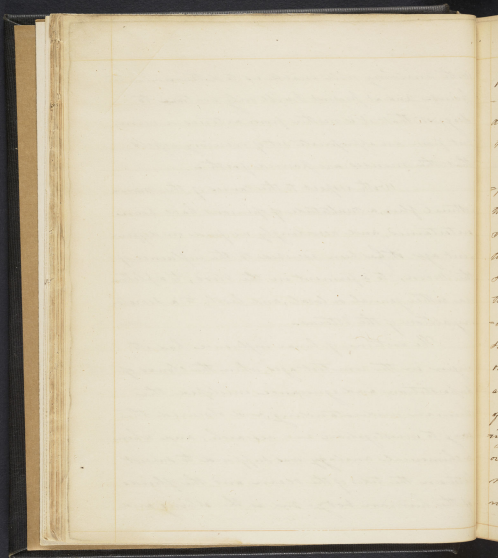
In opposition to this Dr Wm Hunter has ~~declared~~ declared that he had seen the menses proceed from the curling extremities of the arteries in a uterus that was prolapsed\*. But as we are to consider the menses a secretion, and as the ultimate arrangement of the vessels of secretory organs is but imperfectly understood even at the present day, the question must remain in some doubt, until a more minute acquaintance



With anatomy will enable us to determine the points - And at present I will only venture to suggest that it is neither from arteries or veins, but from an appropriate set of excretory vessels that the menses are poured forth -

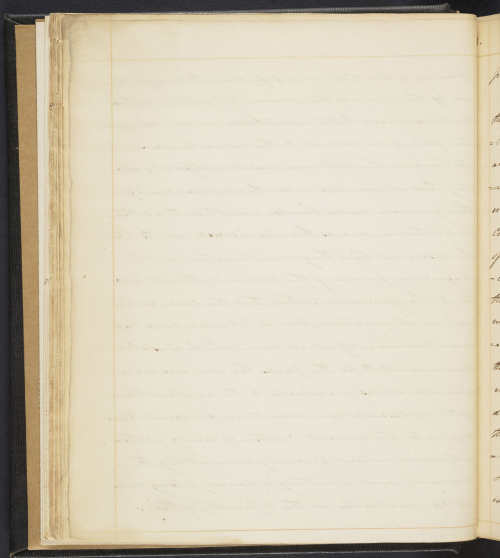
With respect to the Causes of the menstrual flux, a multitude of opinions have been entertained, and accordingly we find in different ages it has been ascribed to the influence of the Moon, to a ferment in the blood, to a plethora, either general or local, and lastly to a secretory action of the Uterus -

The doctrine of lunar influence had its origin in the remotest ages, when the clouds of superstition and ignorance enveloped the human understanding, and obscured the way to investigation and research; and when a chimerical analogy was supposed to subsist between the tides of the ocean, and the fluids of the human body - and as the rising and



flowing of the tides were supposed to be regulated by the phases of the moon, the fathers of this doctrine made little hesitation in ascribing the flow of the menses to the same cause.

As however this doctrine must necessarily imply that all women under the influence of this general cause, should menstruate at the same time, and as this was observed not to be the case, but that they menstruated in all stages and periods of the moon without regard to its changes; and farther, that this cause universal in its operation, should likewise have had some similar effect on men, which was also observed not to be the fact, the idea was soon abandoned as inadequate to the explanation of the fact, and now maintains an equal standing with the ancient custom of curing fractures, the intermittent fever, by committing to memory and repeating a parcel of long words no less remarkable for the difficulty of their



pronunciation than their want of meaning.

The doctrine of a ferment, originated with that class of men now well known by the appellation of the Humoral pathologists, who attributed all the diseases of the human body to some derangement or morbid condition of the fluids, which they believed to be subject to chemical changes. They supposed that by the presence of some acrimonious matter, a violent chemical effervescence or ferment was excited in the mass of blood, by which the uterine vessels were excited, and by a salutary effort, they discharged the noxious matter from their mouths, and thus preserved the system from its baneful influence. The putidity, however, of this doctrine is rendered sufficiently obvious by the light that has been thrown on the animal economy, by the present improved state of physiological science, by which it is made evident that no such chemical

\*See his note to Richards - page 279-

action or ferment can take place in the blood of the living body, & founded therefore on false principles, this doctrine soon gave way to that which maintained the menses to be the consequence of a plethora, which was advocated by the highest authority, was universally received and prevailed for a long time without opposition, until the theory of secretion was suggested; and where this had its origin it is difficult to ascertain. Professor Chepman says "it has been very generally ascribed to the celebrated Mr Hunter; but, he continues, the evidence of his claims to it is exceedingly slender. The only trace of it, which we can discover in his writings, is a vague expression in a paragraph of his Treatise on the Blood<sup>\*</sup> where he says "In healthy menstruation the blood which is discharged does not coagulate; in the unhealthy or irregular it does. The healthy menses therefore shew a peculiar action of the Constitution; and it

\* Vol 1<sup>st</sup> page 26. Phil. Ed. 1<sup>st</sup>

"is most probably in this action that its salutary  
-ous purposes consist:" afterwards however, con-  
-tinues our proposer, he furnished an extract  
from his lectures to be published in Johnson's  
Midwifery, in which he says "The blood discharge  
-ed in menstruation is neither similar to  
"blood taken from a vein of the same person,  
"nor to that extravasated by an accident in any  
"other part of the body; but is a species of blood  
"changed, separated, or thrown off from the  
"common mass by an action of the vessels of  
"the uterus, in a process similar to secretion,  
"by which action the blood having lost its  
"living principle does not coagulate."

Proposer James speaks of Saunders, as having  
been supposed by some to be the first who  
considered the Catamenia a secretion; but  
he remarks that Boerhaave at an earlier date  
treated of the uterus as a gland, and of course  
he supposed considered the menses a secreted

\* See Vol 6<sup>th</sup> page 72

fluids. And we find Haller in his notes on  
the *prelectiones Academicæ* of Boerhaave, speaking  
of the source of the menses, using these words, viz,  
"Sed facile ipsa fabrica partium demonstrat  
uterum naturale organum esse huius secretion-  
is" by which it plainly appears, he at that  
time considered them a secretion, altho' he  
has since maintained a very different opin-  
ion. Doubtful however as may be the  
origin of this theory, it is certainly the only  
one that appears consistent with the general  
laws of the Animal Economy. And I shall there-  
fore undertake to show, why I believe the men-  
strual discharge not to depend on a plethora,  
but rather to be considered the result of a secre-  
tory action in the Uterus.

In the first place, if this discharge de-  
pended on a plethoric condition of the system  
and was intended to relieve the body  
from the weight of superabundant blood,

\* See Friend's Eumenologia. 2<sup>d</sup> Lond. Edit. page 8<sup>th</sup>.

we should only expect to see women of this particular habit affected by it. As well as, that more who are more frequently plethoric should have been provided by nature with some outlet equally efficacious in affording relief from the oppression of too great a quantity of blood.

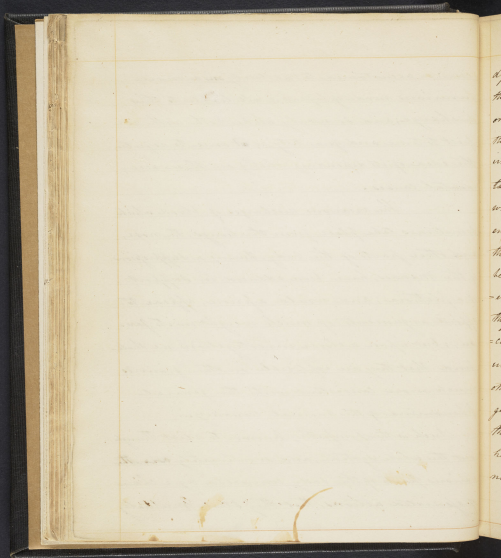
But Dr. Friend, who has been one of the ablest advocates in support of the theory of a plethora, declares that all women are plethoric; and has with much ability and ingenuity attempted to prove it to depend on a deficiency of perspiration, which he says is the case in women, and which he ascribes to a languid circulation, and consequent debility; to their temperament which he says is moister than men's; and to a life spent at home, and not much inured to labour. But to this it is to be objected, that women of all temperaments, whether moist or dry, of a lax or rigid fibre, whether inured, as some are, to hard labour and active exer-

*Handwritten text, mostly illegible due to fading.*

= case; or accustomed to inactivity, ~~and~~ a more  
luxurious mode of life, are all liable to this  
discharge; and so nearly alike both with re-  
spect to time and quantity, as ~~at~~ once, to refute  
the idea of its depending wholly on these acci-  
-dental causes.

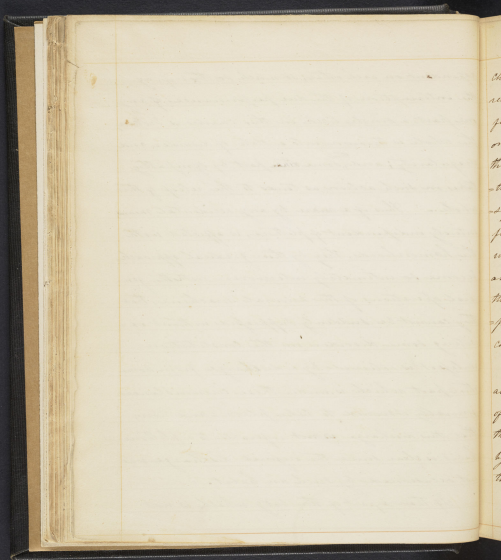
The vicarious discharges of blood which  
sometimes take place from the lungs, the nose,  
and other parts of the body, during a suppression  
of the Menstrues, have been adduced in support  
of a plethoria; and would, a priori, appear to  
afford arguments of much weight in its fav-  
-our; but upon a closer investigation we shall  
find that they are applicable on other grounds  
much more consistent with the general  
Phenomena of the Animal Economy.

Such is the Sympathy known to exist through-  
-out the whole system, and so intimately are the  
various parts of the body connected by a chain  
of associated actions, that they seem mutually



dependant on each other; so much so that if, by  
the interruption of the due performance of any  
one part, a single link in this chain is broken,  
the whole is thrown into a state of disorder and  
irregularity; and, <sup>then</sup> some other part, by sympathy,  
takes on such actions as tend to the relief of the  
whole. Thus if a man by any accidental means,  
entirely independent of plethora, is affected with  
the hemorrhoids, they by their gradual approach,  
become so intimately interwoven with the gene-  
-ral operations of the animal machine, that  
they cannot be suddenly suppressed without ex-  
-citing some disorder in the constitution,  
unless it is relieved by a discharge from some  
other part, which is, under these circumstances  
generally observed to take place. And now  
that this discharge is not referable to a plethoric  
habit is clear, since the original discharge was  
not occasioned by such an habit.

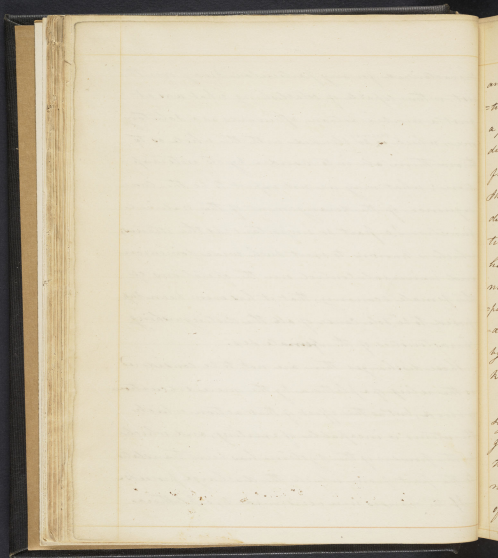
If then a part of the body which is not



Characterized for any particular way over the rest, is thus capable of establishing what was at first a morbid action, afterwards as a salutary one, which <sup>becomes</sup> so blended with the whole as to throw them all into disorder by its interruption; what may we not expect to be the consequence of the derangement of the natural functions, a part so important as the uterus, which is known to exert such wide dominion and universal control over the operations of the female economy, that it has even been supposed to be the sole cause of all the distinguishing characteristics of the female sex.

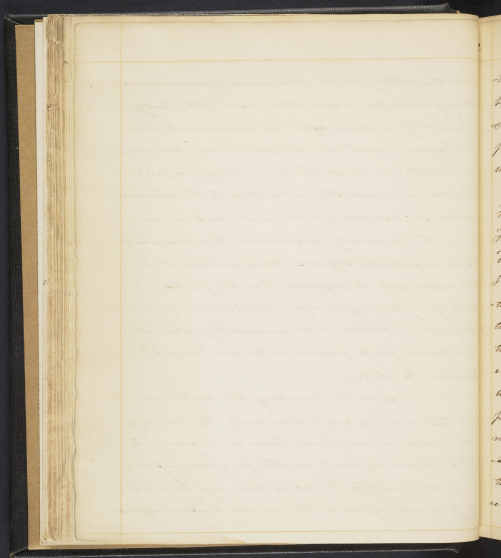
These discharges then are not to be considered as the relief of a plethora by the mere evacuation of blood, but as the effect of that action which the uterus is incapable of exerting, and which by the powers of the system has been translated to the part from which the discharge proceeds.

If the menses were occasioned by a plethora

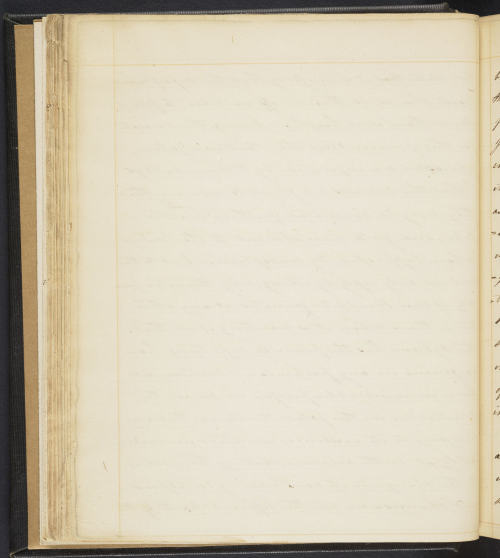


and this plethora could be relieved by an evacuation of blood from any other part of the body, a quantity of blood equal in amount to the discharge of each menstrual period, drawn from the arm at the beginning of a period should immediately put a stop to the uterine discharge; but it is well known that several times the quantity drawn in this way will have no such effect. And farther, it is not reasonable to suppose that this plethora, capable of rupturing the vessels of the uterus by over-distension should be so universally relieved by a discharge so gradual as the menses are known to flow.

Again the friends of this doctrine say that women are vested with the power of generating more blood, than is necessary to their own support, for the purpose of giving nourishment to the fetus during the state of pregnancy; and that in an unimpregnated



ted state that it is necessary, that this superfluous blood should be thrown off in order to preserve their own health. Among the advocates for this opinion stood the illustrious Galen, who, ~~above~~ are informed by D. Friend, says "That the menses are given to women that they may be evacuated for their health's sake, and yield nourishment to the Embryo when Suppressed by conception." But to this I would only reply, by asking, why this extravagance of blood should be generated at any other time than when it is wanting; and that the System has the power of supplying her exigencies in any particular situation, we have innumerable proofs. We see all the peculiarities in the fetal structure, that are necessary to its existence in utero, immediately at birth accommodating themselves to the change in its existence, by correspondent changes: we see the different parts of the



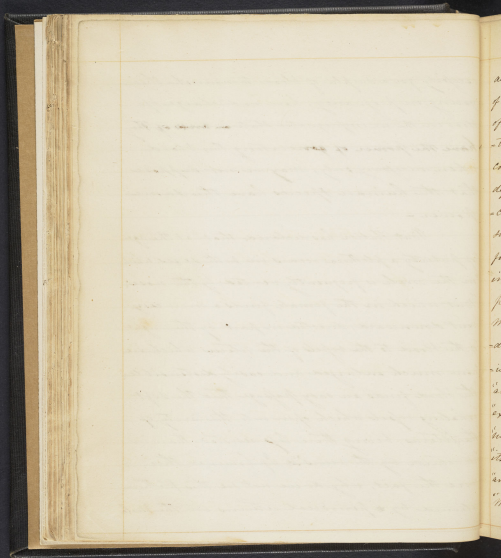
body exerting a wonderful power in supplying  
the necessities of the case in many accidents, as  
for instance, in the formation of a new  
joint in case of a laceration. And, as more  
immediately in point, we see the Uterus,  
itself in pregnancy, taking on such action  
as that <sup>state</sup> necessarily requires; it is gradually enlarge-  
-ed to accommodate the growth of the foetus,  
which is not effected by distension in conse-  
-quence of the increase in the size of the fo-  
-etus; for its sides, (which, if this were the fact,  
should become thinner in proportion to its  
size,) do in fact increase in thickness; and  
its vessels are now enlarged for the purpose  
of supplying a greater quantity of blood, which  
is at this time required.

And again, if we are allowed to call  
analogy to our aid, which if ever admissible  
will certainly apply in the present case; we  
see that Brute animals, which have an equal

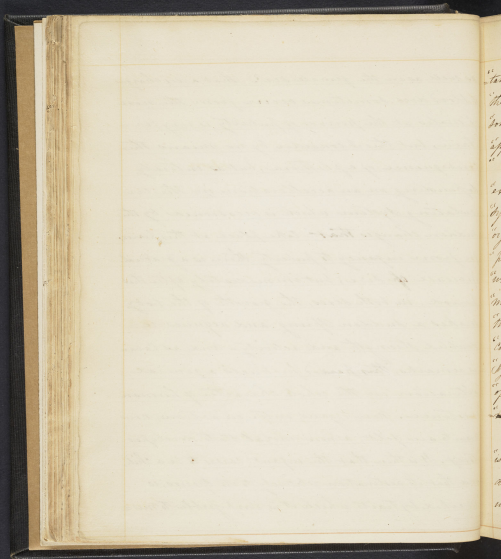
\* See Haller's first lines Edin. Lib. 2<sup>d</sup> vol. page 196.

necessity for a surplus of blood to nourish their young, in pregnancy, have no discharge of blood in the unimpregnated state ~~in~~ <sup>and if they</sup> have the power of generating this blood when necessary only, may we not suppose that the human species have the same power -

But Haller has declared that "at the age of puberty a plethora occurs in both sexes, which in the male is frequently vented by the nose; But which in the female finds a more easy vent downward, directed in part by the weight of the blood to the vessels of the uterus which are soon much enlarged and easily distensible, the blood finds an easy passage thro' the soft exhaling vessels which open into the cavity of the uterus, being there less resisted than in its return by the veins". If however this were the fact, why do we not see this plethora relieved by periodical returns in the Male



as well as in the female sex. That a discharge of blood does sometimes occur from the nose of males at the period of puberty is very certain, but this I consider by no means the consequence of a plethora, but as entirely depending on an acceleration in the circulating system which is occasioned by the sudden changes ~~that~~ take place at this period; for from infancy to puberty there is a gradual increase of size; but immediately after that period, in both sexes, the growth of the body makes a sudden spring, and acquires redoubled strength and activity. And as Caban is remarks, ~~this~~ period produces a general alteration in the whole character of human existence. New organs enter on action, new wants are felt; a new moral state develops itself. It is then that the infant ceases to be a child, and that its destination relatively to its species, is marked by traits which it is impossible to mis-



"take. Among these characteristic circumstances,  
there are two which appear to be common in  
some degree to both sexes, and which would  
appear to merit a particular attention.

"We know the Sympathetic Connection that  
exists between all the branches of the glandular  
system, & we also know that those parts of the  
organs of generation which we may consider as the  
principal focus of their peculiar sensibility, or  
which appear to impress on the others life and  
motion, are to speak correctly, glands. So that from  
the moment when the evolution of these organs  
commences, a general action in all the Lymphatic  
System takes place. The glands of the groin, those  
of the Breasts, of the axilla and of the neck tum-  
esce, and often become painful.

"The tumefaction of the glandular system  
is connected in its turn with peculiar interior  
dispositions and with certain new directions  
which the blood begins at the same time to take.

rule

"It is certain that the reception of the peculiar humours which the genital organs prepare and the direct influence which they exercise by their lively Sensibility, on all the sanguiferous System, impart at that time to the blood more energy and vitality. This fluid becomes more of a Stimulant to the vessels which contain it. Their tone and particularly that of the arteries is considerably augmented. And ultimately the Circulation assumes a Character of activity which it had not before -

"These changes so remarkable in the State & course of the fluid from which all the other fluids are formed must necessarily produce a general revolution: each of these fluids acquires qualities, and above all receives impressions analogous: their secretory organs and their vessels redouble their action."

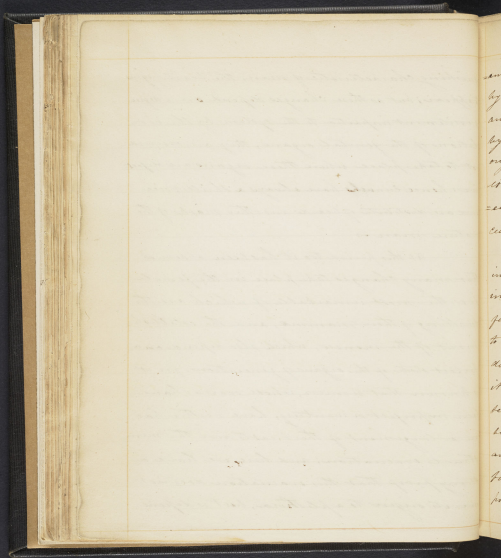
Hence at this period many changes are observed to take place in men, at this period, their voice, which before was shrill and feeble, now becomes rough and strong; and that disten-

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-quishing characteristic of man, the beard, begins to appear; but as these changes depend on a degree of excitement imparted to the system by the evolution of the genital organs, they are observed not to take place when these organs are defective: hence eunuchs have always a shrill voice and are destitute of beards and other marks of the mature man.

At this period too it has been observed that many changes take place in the female sex, the most remarkable of which are the swelling of their mammae, and the establishment of the menses, which also depend on a perfect state of the organs of generation, for it is known that women, whose ovaria have been imperfect or wanting, have neither had an enlargement of the breasts nor the menstrual evacuation; and here we have a strong proof that this evacuation does not owe its origin to a plethora, but is depend-



ant on a particular action of the uterus excited  
by an impression made on it by the ovaries;  
and this appears to me to be made conclusive  
by the fact, that, where the ovaries have been  
originally perfect, and the menses have been  
established; and <sup>they</sup> have afterwards been destroy-  
ed by disease or accident, the menses have  
ceased to flow and never after appeared —

That the menses are a secretion and are  
intended to prepare and preserve the uterus  
in a state fit for Conception I believe to be the  
fact, from having observed a discharge always  
to take place from the vagina of several  
domestic animals; (and from which I infer,  
it takes place from all animals,) during their  
season for Copulation, which I cannot but  
believe is analogous to the menses in women  
and is intended to give the uterus an aptitude  
for Conception — And that the Uterus has the  
power of performing this secretion is evident from

\* Hall's first lines. Edm. Edit. vol 1<sup>st</sup> page 195-

its structure, which is highly vascular; and as is  
the case in other glands, the vessels are so arranged  
as to favour this process: the arteries are known to  
be very large in proportion to the veins, and ex-  
tremely convoluted, with thin coats easily disten-  
sible; for as Haller observes "The return of the  
blood is therefore more slow both because the  
flexures of the arteries from the increased afflux  
of the blood become more serpentine and fit  
for retarding the blood's motion, and likewise  
because it now returns with difficulty through  
the veins<sup>22</sup>" And lastly, this question seems to be  
placed beyond all farther doubt, since it is ascer-  
tained as a fact, that the menses are a fluid  
sui generis, that they are not blood because they  
have neither its coagulability nor colour, and are  
said on chemical analyses to present different  
results from blood. I therefore conclude that the  
Catamenial discharge is the result of a secretory action  
of the Uterus by which it is prepared for conception.

